in revenues, federal tax revenues have increased in every year since 1980. Since taxes continue to absorb exactly the same share of GNP as they did before the deficit exploded -- 19.4 percent -- it should be obvious that the contemporary deficit does not result from tax cuts.

Does the Nation Require Increased Spending?

Increased government spending only can come at the expense of economic growth. Contrary to a prevelant mythology, federal spending has not been slashed over the past 8 years. The rate of growth in federal spending averaged 11.3 percent a year between 1980 and 1986 compared to a 9.3 average annual rate of increase in federal revenues. All of the major safety net programs grew in real terms between 1980 and 1988. During this period, Social Security (OASDI) rose at an average annual real rate of 3.2 percent; Medicare spending rose at an average 6.9 percent annual real rate; and health care services other than medicare grew in real terms at a 3.7 annual real rate. Even the slowest growing component of the budget, income security, grew in real terms over the 1980-1988 period. Including unemployment insurance, income security programs grew at a 0.2 percent real rate. This figure, however, understates the growth in transfers to the truly needy because the post-recession economic boom permitted unemployment programs to decline in real terms. Excluding unemployment, the rest of the income security budget category grew at an average real annual rate of 1.4 percent.

Conclusion

The record speaks for itself. Tax revenues have increased and the deficit is shrinking. Because a tax increase is likely to be a vehicle for additional government spending rather than less, it is as likely to increase the deficit as it is to reduce the deficit. The major threat to continued economic expansion is increased government spending financed by higher taxes. A tax increase would slow economic growth since it is more likely to reduce the amount of money available for productive investment rather than to increase it and increasing taxes will reduce the incentives for productive economic activity. By slowing economic growth, a tax increase would threaten to cripple the most effective bulwark against poverty and unemployment.

DO WE NEED A TAX INCREASE?

THE ARGUMENT FOR A TAX INCREASE

As measured by the comments of a majority of the nation's leading economic commentators and editorial writers, the conventional wisdom is that the United States needs a tax increase. Day after day, Vice President Bush is ridiculed as unrealistic and untruthful for insisting he will not raise taxes. Even Governor Dukakis, who admits readily that he holds open the option of higher taxes, is treated with mild disdain for qualifying his position. The Governor maintains that he will raise taxes "only as a last resort."

The belief that taxes must be raised has its roots in the following argument that often is made in full or only in part:

Premise: The United States is awash in debt and consequently faces rising interest rates and a capital formation crisis;

Premise: Raising taxes to reduce the budget deficit would significantly increase investment and lower interest rates.

Premise: The Reagan "tax cuts" were so deep that it would require unacceptably large spending cuts to balance the budget by bringing expenditures down to the level of revenues; and

Premise: The country has so many unmet needs that government spending should be increased, not decreased.

Therefore: A tax increase is unavoidable.

This chain of reasoning would be air-tight but for one problem: All of the premises of the argument are false.

HOW LARGE IS THE DEFICIT?

The Federal Deficit Relative to Current GNP. The first myth in the argument for increasing taxes is that the federal deficit is dangerously large. This myth has been perpetuated by too great a concentration on the deficit's size in terms of absolute nominal dollars.

Relative to the size of the nation's output, it is an exaggeration to characterize the federal budget deficit as massive. In 1980, the federal budget deficit was $73.8 billion, which amounted to 2.8 percent of GNP. By 1983, the deficit had been driven by a particularly severe recession and unusually high interest rates to a post-war high of $207.8 billion or 6.3 percent of GNP. [1] By 1987, the federal deficit had fallen to 3.4 percent of GNP, and in 1988 the bipartisan budget agreement will hold the deficit to a maximum of $146 billion, or about 3.1 percent of GNP, close to its 1980 level.[2]

The federal government has run a budget deficit in 34 of the 42 years since the end of World War II. Deficits averaged 1.6 percent of GNP over this period. By post-war standards then, a deficit of 3.1 percent of GNP remains above average but not of crisis proportion. Moreover, the deficit has ceased growing and is now declining, assuring that the burden it places on the economy will diminish over time.

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[1] The Federal Reserve Board used brute force to bring inflation down by pushing interest rates to extraordinary highs and driving the economy into recession.. Interest rates peaked on a per annum basis in 1981, the year the recession began, and dropped only slightly in 1982 during which the recession was most severe. In 1981, the prime rate averaged 18.87 percent and the interest rate on 90 day Treasury Bills averaged 14 percent. In 1982, the average Prime Rate fell to 14.86 and the interest rate on 90 Day Treasury Bills declined to 10.7 percent on average. A recent analysis by the U.S. Treasury Department found that "the business cycle and compounding high interest rates -- not changes in tax structure or programmatic spending -- are the causes of the major 1982-83 jump in the federal deficit. ...It appears that the government deficit problem is not a matter of fiscal strategy, but must be related to the behavior of the cyclical deficit and interest rates." (See Darby, Michael R., Research Paper No. 8704, "Accountingfor the Deficit," U.S. Treasury Department, October 2, 1987)

[2] Unless otherwise noted, all U.S. budget figures are taken from *Historical Tables: Budget of the United States Government*, U.S. Government Printing Office, Washington, D.C., 1988.

The Federal Deficit Relative to Future GNP. It is frequently argued that running large contemporary deficits mortgages the nation's future. Make no mistake, persistent budget deficits generally are undesirable for a whole host of reasons discussed below. However, it is easy to overstate the magnitude of the economic burden generated by budget deficits. Once the issue becomes politicized, it is expedient for some politicians to overstate the benefits of reducing the deficit quickly without considering the economic costs of doing so.

As anyone who holds a home mortgage understands, the effects of growing real income greatly reduce the current burden of debt acquired at an earlier date. As long as deficits do not grow larger every year, they become less burdensome each year the economy grows and/or inflation persists. For example, a deficit of $150 billion in 1987 represented 3.4 percent of GNP. With annual GNP growth of 7 percent (say, 3 percent real growth and inflation of 4 percent), a $150 billion deficit in 1990 would equal only about 2.7 percent of GNP, a reduction of over 20 percent in three years.[3]

The Total Governmental Sector Budget Deficit. A preoccupation with the federal government also helps to perpetuate the false impression that the economy is staggering under a crushing burden of government deficits. When evaluating the economy-wide effects of government borrowing, such as the effects on private capital formation, it is necessary to consider total state, local and federal government borrowing. In 1987, all three levels of government combined spent only $103.3 billion more than they raised in revenues because

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[3] The same holds true, obviously, for the much larger federal debt. Given a national debt of approximately $2 trillion held by the public, the effects of inflation alone dramatically diminish the debt burden. In a single year, a 4 percent inflation rate erodes the real value of the debt by some $80 billion.

the state and local sector actually ran a budget surplus on balance. This total governmental sector deficit amounted to only 2.3 percent of GNP.

When the total governmental sector deficit is considered, the United State compares quite favorably to other industrial nations. In 1986, total governmental budget deficits in the OECD nations averaged 3.4 percent of GNP compared to 3.8 percent in the United States. Since that time, the U.S. government deficit declined more rapidly than it did on average among the OECD countries. In 1987, OECD total governmental deficits averaged 2.5 percent of GNP compared to 2.3 percent in the United States.

Summary. The federal budget deficit shot up to historically high levels in the aftermath of the 1981-1982 recession, after which it fell back substantially. In 1988, the total governmental sector deficit in the United States is comparable to the total deficit of other industrial nations. Even if deficits do not fall in absolute terms, if they at least do not increase beyond current levels, the burden they place on the economy will decline automatically as a result of real economic growth. To the extent that inflation persists, the future burden of today's deficits will be diminished even further by the inflation tax levied on current holders of government debt. In conclusion, the economic facts do not warrant continued hyperbole concerning the size of the federal budget deficit.

DOES THE NATION FACE A CAPITAL FORMATION CRISIS?

Two persistent myths in contemporary reporting on the economy are that the United States faces a crisis of capital formation because Americans are not saving enough and investment is lagging. Each myth is examined below.

American Savings Behavior. The reportedly low U.S. savings rate is usually criticized -- and is frequently contrasted unfavorably with Japan's rate -- because it undermines the ability to finance productive investment. The personal savings rate decline began in 1974. There is, however, controversy over how to measure the national savings rate properly. Numerous experts argue that the low American savings rate is largely a statistical artifact of the official method used to measure personal savings in the United States. For example, increases in household net worth are excluded from official savings data as are all civil service pension funds, which are credited to government savings. Moreover, proportionately more savings in the United States is business savings than is the case in other industrial countries.

When all sources of savings are added up, the U.S. savings rate is significantly higher than usually reported. Using similar measures of savings for the U.S. and Japan (including stock market values), Japanese researchers find that in 1985 (the most recent year for which data are available) the U.S. savings rate was 14.7 percent compared to 16.7 percent in Japan -- a much smaller difference than is commonly reported. [4] Increases in wealth measured in dollars are still larger for the United States than any other country, approximately $500 billion per year or $2,072 per capita. Japan has averaged only $176 billion in annual wealth increases or $1,449 per capita.

Investment in the United States. Growth in fixed investment averaged only 1.9 percent a year during the entire 1973-1982 period. During the 5 years spanning 1978 to 1982, fixed investment fell by more than $100 billion, and corporate profits declined. Since 1983, fixed investment has grown at an average annual rate of 6.6 percent. Over the same

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[4] Ohmae, Kenichi, "Americans and Japanese Save About the Same," *Wall Street Journal, June 14, 1988.*

time span, the growth rates of fixed investment in Canada and France actually fell, while they rose only slightly in Japan and Germany. During the first quarter of 1988, fixed investment in the U.S. rose at an annual rate of 21 percent.

U.S. companies invested heavily abroad during the late 1970s partly because of high income tax rates and double-digit inflation that eroded after-tax profits in the U.S. and made depreciation allowances obsolete. Tax rates were reduced in the early 1980s, inflation was brought down, and as a result, U.S. investment and corporate profits have begun to soar again. During the last five years, real private investment rose by more than $200 billion, while corporate profits doubled.

Average Annual Growth Rate in Fixed Investment

Country	1973-82	1983-87
United States	1.9	6.6
Canada	4.9	4.7
Japan	4.4	5.3
France	2.3	0.2
Germany	1.1	1.7

Source: *OECD Economic Outlook*

Increasing Capital Formation by Tax Reform. While it may be true that Americans save and invest less than is desirable to achieve maximum economic growth, it is a gross exaggeration to characterize current rates of savings and investment as crisis-provoking. Certainly, a greater rate of capital formation is desirable, however it makes no sense to seek greater capital formation by imposing taxes on investment. The secret to achieving greater savings and investment is to reform that section of the tax code that currently places an undue burden on savings and investment.

The greatest boost to capital formation would result from reversing the mistake made in the 1986 Tax Reform Act of increasing the capital gains tax rate -- to 33 percent for individuals and 34 percent for corporations. How quickly members of Congress forgot the damage high capital gains taxes did during the 1970s. In 1978, the individual capital gains rate was cut from 49 to 28 percent and further reduced in 1981 to a top rate of 20 percent. Over the next five years, capital formation surged. In 1986, Congress chose political expediency over good economics when it chose to raise the capital gains tax rate again.

Higher capital gains tax rates are economically counterproductive and will reduce federal revenues. High capital gains rates reduce venture capital formation and hinder the ability of small businesses to raise capital. Perhaps most importantly, high capital gains tax rates reduce market liquidity by providing a powerful disincentive to realize gains. This "lock-in effect" of high capital gains rates actually costs the government revenue. Conversely, the capital gains rate reductions of 1978 and 1981 demonstrably increased federal revenues, and most economists that have analyzed the empirical data have come to the conclusion that a reduction in the present rate would increase revenue. Cutting the capital gains rate is just about the only pro-growth tax "increase"available to policy makers.

Recent research conducted by the U.S. Treasury Department confirms these claims. The Treasury study demonstrates conclusively that a reduction of the capital gains tax rate would not reduce revenue, and the research provides convincing evidence that such a rate reduction actually would increase revenues.[5]

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[5] Darby, Michael R., Robert Gillingham and John S. Greenlees, Research Paper No. 8801, "The Direct Revenue Effects of Capital Gains Taxation," U.S. Department of the Treasury, May 18, 1988.

Other mistakes were made in the 1986 Tax Reform Act that stand in need of correction to enhance capital formation. The capital cost recovery allowances available to industry under the 1986 Act are inadequate. The higher cost of capital implicit in this new regime will reduce our capital stock, productivity and competitiveness.

Most forms of savings mechanisms that reduced the double taxation of savings income implicit in an income tax were scaled back by the 1986 Act. In particular, Individual Retirement Accounts and section 401(k) plans were made unavailable to millions of middle class taxpayers trying to provide a sound basis for their retirement.

Summary. The best way to improve capital formation in the United States is to reduce the burdens on savings and investment at the sources. First, Congress should hold down the rate of growth of federal spending. Second, Congress should repeal distortive tax policies that increase the cost of capital and discourage savings.

WILL TAX INCREASES INTENDED TO REDUCE THE DEFICIT ACTUALLY REDUCE THE DEFICIT, REDUCE INTEREST RATES AND INCREASE INVESTMENT?

The ability of an economy to continue growing depends critically upon adequate capital formation. Every dollar diverted from the private sector into the public sector reduces the flow of savings available for private capital investment. The fear that government may crowd out private sector investment, therefore, is genuine.

Proponents of tax increases err, however, when they overemphasize the "crowding out" effects of deficits as compared to tax financing and when they underestimate the negative economic consequences of tax increases. More fundamentally, advocates of tax increases err when they ignore the fact that it is the total level of government spending,

regardless of how it is financed, that places the real burden on private capital markets.

Boosters of tax increases bias the outcome of their analysis in favor of tax increases by taking the current level of government spending as a given. Then, they pose the policy choice as being between deficit finance or tax finance of a fixed level of spending. Within this framework, proponents of a tax increase adopt a static economic model to predict what will happen when taxes are raised.

The Static Economic Model. The static economic model on which proponents of tax increases base their argument runs as follows: Using deficits to help finance a given level of government spending both soaks up private savings that otherwise would be available for private investment and raises interest rates above what they otherwise would be. Raising taxes would decrease the government's drain on the flow of savings by the amount of the tax increase because government no longer would have to borrow that amount in the credit markets. People would reduce savings somewhat to pay their higher taxes but not as much as government's demand for credit would fall, since people will pay part of their increased tax bill by reducing consumption as well. The net effect of higher taxes, if used to reduce the deficit, would be to increase the supply of private savings available for private investment and to reduce interest rates.

The problem with this model is that it is incomplete. It fails to take into account the detrimental effects of tax increases and it fails to focus on the real sources of the problem regarding capital formation -- excessive government spending and distortive tax policies. Furthermore, the model operates in a world of comparative statics in which adjustments are instantaneous and without side-effects.

Few economists dispute the fact that, to some extent, deficits increase real interest rates, reduce private capital formation and create inflationary pressures. [6] The inflationary pressure is created as a side-effect of the upward pressure on interest rates generated by deficits. When government borrowing puts upward pressure on interest rates, the Federal Reserve Board is tempted to intervene to keep rates from going too high. The FED accomplishes this feat by printing more money than it otherwise would. In other words, the FED monetizes the deficit by allowing the money supply to grow more than is warranted by the real rate of economic growth, which causes inflation.

In dispute is how successful the political process can be in devoting a tax increase to deficit reduction; how much more deficit financing reduces capital formation than an equivalent amount of tax financing; how much higher deficits raise interest rates than an equivalent amount of tax financing; and the extent to which the economic side-effects of reducing an existing deficit quickly with tax increases will more than counteract any beneficial effects on capital formation and interest rates. Allan Meltzer, who has defended the notion that "deficits count" against the more iconoclastic neo-Ricardian view that they have no macroeconomic effect, places the controversy in context:

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[6] While the popular discussion of budget deficits has reached the point of hysteria, suggesting that the U.S. economy is on the brink of calamity, the academic discussion has gone in exactly the opposite direction. In a seminal 1974 article, Robert Barro argued that the "fiscal effects involving changes in the relative amounts of tax and debt finance for a given amount of public expenditure would have no effect on aggregate demand, interest rates and capital formation." (See Barro, Robert J., "Are Government Bonds Net Wealth?," *Journal of Political Economy*, 1974, vol. 82, no. 6, pp. 1095-1117) In this so-called neo-Ricardian equivalence context, the deficit is equal to the present value of future lump sum taxes and it has no macro economic effects per se. In a recent paper, Allan Meltzer sums up the current state of research on budget deficits: "A considerable amount of empirical research has not isolated reliable or consistent effects of deficits, debt, expected deficits or debt on real interest rates. Theoretical work on deficits, debt and capital accumulation finds such effects in models when income redistribution is admitted or in models with finite horizons. Some models find effects of the deficit on investment, although writers may recognize that the estimates are tenuous." (See Meltzer, Allan H., "Economic Policies and Actions in the Reagan Administration," paper prepared for the session "An Economic Assessment of the Reagan Years with Different Paradigms," Chicago, December 28, 1987)

> Public hand-wringing about the deficit is surprising, to put it mildly. ...The effect of the deficit on investment, holding the composition of government spending constant, strikes me as secondary to the direct allocative effects of government spending.[7]

Incompleteness of the Static Model. A number of considerations are omitted from the conventional static economic model that, when factored into the analysis, completely reverse the judgment in favor of tax increases. First, a suppressed premise of the model is that the tax increases under consideration will come from non-distorting taxes, usually taken to be lump-sum taxes for analytical simplicity. Of all the possible simplifying assumptions one could make, this is the least realistic.

The tax increases enacted in 1982, 1984 and 1987 all came primarily at the expense of savings and investment. Moreover, the overwhelming majority of the base-broadening provisions in the 1986 Tax Reform Act also increased the relative cost of saving and investment. Businesses and individual savers and investors will remain attractive political targets as long as a "soak the rich" ethic has the upper hand.

A common mistake is made by analysts who assert that the impact of a consumption tax on savings and investment is negligible. A consumption tax is a proportionate tax on all factors of production, including capital and labor. A consumption tax reduces the return to all inputs. Thus, the notion that a consumption tax exempts savings and investment from taxation is wrong. The only virtue of a consumption tax is that it does not tax the return to capital twice as does the income tax.

Secondly, the model predicts that tax increases will yield increased investment and lower interest rates because government's demand for credit is anticipated to fall more

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[7] See Meltzer, *op cit.*, p. 12.

than the supply of private savings. According to recent research conducted by the U.S. Treasury, [8] proponents of tax increases are substantially overestimating the extent to which a tax increase will reduce consumption rather than private saving. The recent Treasury study found that, at least in the first few years, tax increases will come largely (80 percent) out of private saving. Only about 20 percent of the tax increase will come from reduced consumption.

Finally, a central assumption of the static model is that the entire tax increase will go toward deficit reduction. The critical nature of the assumption is apparent in light of the above finding by the Treasury, and history clearly demonstrates the fallacy of the assumption. Last year's "budget summit" between Congress and the President offers persuasive evidence that even under the most propitious circumstances, part of any tax increase will be diverted from deficit reduction to increased public spending.

In a crises atmosphere after the October, 1987 stock market crash, taxes were raised by $29 billion over a two year period, yet the deficit was anticipated to decline no more than $21 billion (from $150.4 billion in 1987 to $129.5 in 1989). Only 72 percent of the tax increase was ever intended to go toward deficit reduction while 28 percent was destined for spending increases. Using Treasury's estimate that only 20 percent of any tax increase is likely to come out of private consumption, one must conclude that no net increase in private investment resulted from last year's tax increase. To the contrary, the net effect of this tax increase was to decrease savings below what they would have been and to increase consumption -- public consumption. The real effect of the tax increase was to substitute

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[8] Darby, Michael R., Robert Gillingham and John S. Greenlees, Research Paper No. 8702, "The Impact of Government Deficits on Personal and National Saving Rates," U.S. Treasury Department, August, 1987.

more public consumption for private consumption and private savings. The discouraging aspect of this illustration is that it represents the best possible combination of events one could anticipate to force politicians to devote all of a tax increase to deficit reduction.

Extraction Costs of Taxation. All taxes impose extraction costs on the economy over and above the total of the tax dollars collected by the government. These extraction costs can be viewed as the overhead cost of raising tax revenues that is borne by the private sector. Taxation, like any extraction process, entails diminishing returns. Recently, several economists have analyzed the cost of raising tax revenues to fund public spending and found the cost of extracting the taxes to be a significant share of the revenue raised.

One kind of extraction cost results from the burden of complying with tax laws. An illustration of this was reported in the 1985 *Report of the President's Council of Economic Advisers*. The report noted that the real compliance burden of record keeping and tax preparation were substantial both to individuals and businesses. The Council Report cited one study that found the average private compliance cost of Federal and State personal income taxes to be between five and seven percent of the revenue raised.

The other major type of extraction cost results because people dislike transferring their income to government and alter their behavior in response to a tax. For example, suppose the government decides to finance expenditure by raising marginal tax rates on income. An individual deciding whether to work an additional hour now finds that the after-tax return from the extra work is lower or alternatively that the opportunity cost of not working the extra hour, that is the cost of enjoying an hour of leisure, is now lower. Since leisure is a good, economic theory predicts that, holding all else constant, as the cost of leisure falls as a result of rising marginal tax rates, individuals will consume more leisure

-- they will work less. Thus, extraction by raising marginal tax rates is costly because individuals will work less (at least in the taxed sector) thereby reducing national income.

In a study by Shoven and Whalley, the authors estimate that raising the tax on capital in manufacturing from 0 percent to 50 percent results in a welfare loss equal to almost one-fourth of the tax revenues. [9] For every dollar raised in taxes, the private sector bears an additional 25 cent burden. For public spending financed by such a tax to be cost efficient, society must experience a rate of return in excess of 25 percent. Once at a 50 percent tax rate, the authors found that the marginal deadweight loss from raising another dollar of revenue from the tax on capital was almost 80 cents. The rate of return on public expenditure of each additional dollar would have to exceed 80 percent -- a return of $1.80 per dollar of cost -- if such spending is to add to national income rather than detract from it.

Ballard, Shoven and Whalley found, assuming a conservative labor supply elasticity of .15, that the welfare loss from a 1 percent increase in income tax rates is 28 cents per dollar of extra revenue. [10] Additional public expenditures funded from broad based income taxes, therefore, actually will reduce national welfare unless their marginal benefits are at least 28 percent greater than the revenues needed to fund the project.

Given the high overhead costs of raising taxes, public spending must generate very high rates of return to make it worthwhile. Many public spending programs that on the surface appear cost effective are in fact wasteful when the marginal excess burden generated

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[9] See Shoven, John B. and John Whalley, "Applied General Equilibrium Models of Taxation and International Trade: An Introduction and Survey," *Journal of Economic Literature*, Vol. XXII, September, 1984, pp. 1007-1051.

[10] Ballard, Charles L., John B. Shoven and John Whalley, "General Equilibrium Computations of the Marginal Welfare Costs of Taxes in the U.S.," *American Economic Review*, March, 1985, pp. 128-138.

by raising the additional taxes to pay for the programs is taken into account. Likewise, any economic model that posits positive macroeconomic benefits from raising taxes to reduce the deficit must also factor extraction costs into the equation. When the reality of extraction costs is added to the findings of the previous section, it becomes even less plausible that tax increases to reduce the deficit would accomplish the objective of strengthening the national economy.

Summary. This section has been devoted to demonstrating why tax increases will not accomplish the objective of strengthening the economy by reducing the deficit. First, it was shown on balance that proponents of tax increases greatly overstate the potential of a tax increase to increase investment and reduce interest rates. Secondly, the static economic model was elaborated to account for important considerations routinely ignored by proponents of tax increases. It was then shown why a tax increase should be expected to weaken the economy. Next, it was demonstrated that political reality makes it virtually certain that tax increases would be substantially diverted away from deficit reduction toward increased spending further calling the efficacy of tax increases into question. Finally, empirical findings were reviewed that reveal heavy extraction costs of taxation that further call into doubt the prudence of a tax increase.

ARE TAX CUTS RESPONSIBLE FOR THE DEFICIT?

Tax cuts have not been responsible for the deficit. Even a cursory examination of federal revenue data reveals that there has been no cut in tax revenues despite the fact that marginal tax rates were reduced. With the exception of a one-year recession-induced drop in revenues, federal tax revenues have increased in every year since 1980. Since taxes

continue to absorb exactly the same share of GNP as they did before the deficit exploded -- 19.4 percent -- it should be obvious that the contemporary deficit does not result from tax cuts.

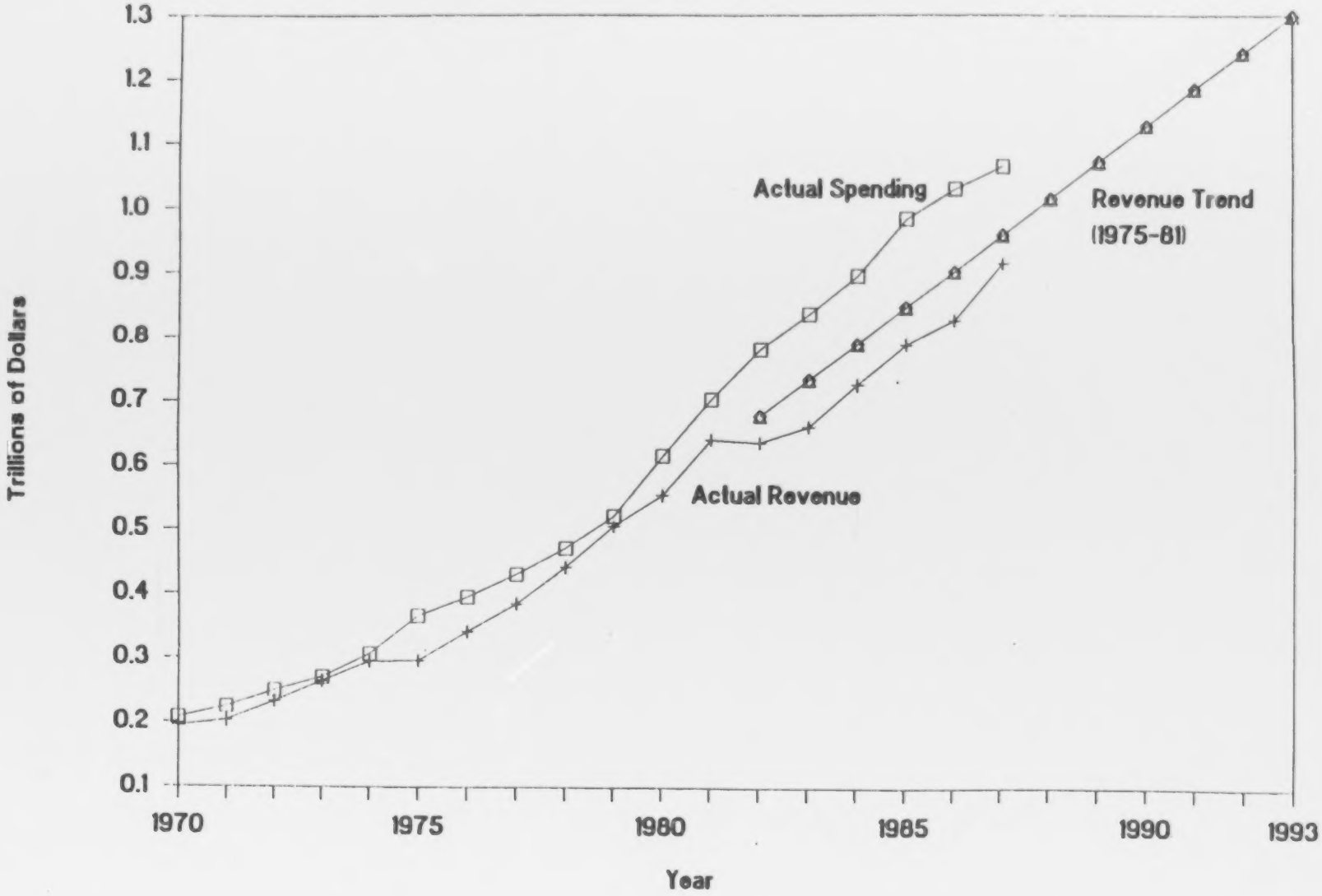
The sudden explosion of the federal budget deficit between 1979 and 1986 was the result of two fiscal phenomena: an acceleration in the rate of increase in federal spending, which began in 1979, and a recession related, one-time reduction in the revenue base from which federal revenues grew, albeit at an accelerated pace, after 1982.

The magnitude of the deficit-producing discrepancy between spending and revenue growth rates is illustrated by comparing the average annual rates of change in spending and revenues between 1980 and 1986. Federal revenues increased at an average annual rate of 9.3 percent during this 6 year span, which virtually matches the 9.5 percent growth rate of nominal GNP. The rate of growth of federal spending, by comparison, exploded over this same time period running at an average annual rate of 11.3 percent.

Since 1986, the rate of growth in federal spending has been reduced dramatically to 3.3 percent a year. Revenues continue to rise in the neighborhood of 9.3 percent. The deficit, not surprisingly, has shrunk dramatically as well since 1986, from $221.2 billion to an estimated $146.7 billion in 1988.

The graph below illustrates how the deficit may be partitioned in two based upon its two sources -- increased spending and the recession. The area above the 1975-1981 revenue trend line represents that portion of the deficit caused by accelerating spending growth. The area below that trend line represents the portion of the deficit resulting from

Federal Revenue and Spending



depression of the revenue base by the 1981-82 recession. [11] The table below provides details on the composition of the deficit since 1982.

COMPONENTS OF THE FEDERAL DEFICIT
(Billions of Dollars)

YEAR	FEDERAL DEFICIT	SPENDING ACCELERATION	REVENUE BASE DISPLACEMENT
1982	145.9	103.9	42.0
1983	176.0	102.1	73.9
1984	169.5	105.2	64.3
1985	196.1	137.8	58.3
1986	204.7	128.7	76.0
1987	151.4	107.2	44.2

Source: U.S. Chamber of Commerce staff calculations based upon National Income and Product Accounts.

DOES THE NATION REQUIRE INCREASED SPENDING?

The Federal Spending Myth. Two fiscal myths have flourished during the 1980s. The first -- that the federal budget deficit results from massive tax cuts -- was discredited in the previous section. The second myth -- that federal spending, especially human services programs, have been slashed over the past 8 years -- is addressed in this section.

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[11] This graph and the accompanying table are based on calender year budget data taken from the National Income and Product Accounts (NIPA). The NIPA receipts and expenditures data are the most appropriate measure of government activity in relation to the national economy at large. The Revenue Trend line is estimated by extrapolating the 1975-1981linear trend in revenues (the slope of which had increased from the pre 1975 period) out to 1993. This line represents an estimate of what federal revenues would have been had the revenue base not been displaced by the 1981-82 recession. (See also, Roberts, Paul Craig, "While Critics Carp, the Supply-Side Revolution Sweeps On," *Business Week*, April 25, 1988, p. 15) Notice that subsequent to the recession, actual revenues grew slightly *faster* than the pre-recession trend, offering further evidence that the marginal tax rate cuts were not responsible for any revenue loss. At current rates of growth, the recession effects on revenues will have disipated completely within the next 1 or 2 years. The graph also illustrates how federal spending began to diverge dramatically from its historic trend after 1979.

The task of myth-making on the spending side is to reconcile the reality of dramatic growth in federal outlays with the assertion of draconian spending cuts. This task is accomplished by exaggerations, distortions and outright falsehoods. Three basic techniques have been employed.

First, the myth-makers repeatedly refer to any reductions from the so-called current services baseline as "spending cuts." In fact, the current services baseline reflects a rising trend of outlays that significantly overstates the amount of outlays required from one year to the next to provide services under existing law. It is possible for programs to experience a real increase in funding and still be scored a "budget cut" by the myth-makers.

The source of this overstatement lies with the way inflation projections are treated in the current services framework. The current services baseline is based on inflation projections. Whenever actual inflation is less than projected inflation, as it has been frequently since 1980, limiting spending increases to the actual increase in the inflation rate, rather than the projected rate, has been interpreted paradoxically as a spending cut. Typically, Congress has elected to reduce spending from the current service baseline level to the level justified by actual inflation levels. This "reduction" is then counted as a "spending reduction" not just this year, but in every year that Congress maintains the original "reduction" in spending below the current service baseline.

By repeated reference to a hypothetical current services baseline that is based on inflation and growth projections, the myth-makers have been able to label spending increases as "cuts." For example, even though Medicare has increased at an average real rate of 6.9 percent since 1980, using the current services baseline for comparison makes it appear as though Medicare has been "cut" by more than $50 billion.

The most popular way to exaggerate the distortion of the current services concept is to claim that safety net spending has been slashed. This assertion simply is untrue. All of the major safety net programs grew in real terms between 1980 and 1988 in spite of cuts from the rising trends generated by the current services methodology. During this period, Social Security (OASDI) rose at an average annual real rate of 3.2 percent; Medicare spending rose at an average 6.9 percent annual real rate; and health care services other than medicare grew in real terms at a 3.7 annual real rate.

Even the slowest growing component of the budget, income security, grew in real terms over the 1980-1988 period. Including unemployment insurance, income security programs grew at a 0.2 percent real rate. This figure, however, understates the growth in transfers to the truly needy because the post-recession economic boom permitted unemployment programs to decline in real terms. Excluding unemployment, the rest of the income security budget category grew at an average real annual rate of 1.4 percent.

The final technique of the spending myth-makers is to exaggerate the extent to which defense spending has crowded out other components of the federal budget. National defense comprised about 5 percent of GNP in 1980, well below the 7 to 9 percent range defense had claimed of GNP during the 1960s. By 1980, real defense spending had fallen 17 percent below what had been a steady state level of funding in the peace-time era 1955-1966 between the Korean and Vietnamese Wars. In 1986, defense spending achieved a post-Vietnam high funding level at 6.5 percent of GNP, but in 1988, defense spending is expected to slip back to 6.1 percent of GNP.

The Myth of Unmet Needs. Elaborating on the myth that federal spending has been slashed is the myth of pent up demand for public spending. This argument runs that the

past 8 years have permitted enormous "unmet"public needs to build up that now must be addressed with new spending.

It may be the case that citizens desire more public spending. It is just as plausible, however, that voters do not desire to resume the rapid growth of government experienced throughout the 1960s and 1970s. This is an empirical-political question that only can be determined by peoples' preferences, not by technical considerations of what is "needed"by society. What is amenable to technical analysis, however, is the economic cost that would accompany increased public spending. The following section examines these costs.

Government Spending and Economic Growth. An area of heightened interest among economists is the relationship between government spending and the rate of economic growth. A number of scholars have begun to estimate the economic effect of government expenditures on the supply side of the economy. A growing body of empirical evidence supports the hypothesis that there is a significant negative relationship between government spending and economic growth rates.

Grier and Tullock in their study of international growth rates have found a persistent negative correlation between the growth of government's share in gross domestic product and economic growth. [12] Barth and Bradley, who also studied the effect of government spending internationally, found a statistically significant negative relationship between government expenditure and economic growth rates in virtually every specification of the model they tested. As Barth and Bradley reported, "This finding holds for all levels of

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[12] Grier, Kevin B. and Gordon Tullock, "An Empirical Analysis of Cross-National Economic Growth, 1950-1980," unpublished manuscript, George Mason University, May 1988.

government as well as for all types of governmental spending."[13]

These studies show that government expenditures reduce economic growth rates not only because extraction costs are substantial but also because many kinds of government expenditures have a negative effect on economic growth that is completely separate from the cost of extraction. The key to understanding how public spending by itself reduces income is to understand that not all government expenditure has the same effect on the economy.

Government spending is comprised of three basic components: transfer payments, purchases of goods and services and investment spending. Each type of government expenditure is likely to have different effects on output. Of the three components, investment spending is the only expenditure that possibly can lead to greater output. Transfer payments that require an individual to stop undertaking productive activity in order to qualify, reduce rather than expand economic output. For example, individuals will lose social security payments if they work and earn more than some threshold level. Welfare recipients in most cases will lose government benefits if they engage in full employment. Thus, transfer payments provide disincentives for individuals to be productive.

Purchases of goods and services only replace private consumption and do not increase income. In contrast, government expenditure on investment is the only possible form of spending that under certain conditions actually may increase economic growth rates. At low levels of government spending, economic growth also is low. In conditions of anarchy or

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[13] Barth, James R. and Michael Bradley, *The Impact of Government Spending on Economic Activity*, The National Chamber Foundation, Washington, D.C., 1988.

weak government, the public goods and services essential for the proper functioning of markets -- personal property rights, police forces to protect the rights of people and property, an effective judicial system, national defense against foreign predation, and so forth -- simply do not exist.

Once government provides those essential public goods (a public good is an indivisible and nonexcludable good or benefit, like constitutional rights or national defense, that government alone can provide), it becomes more likely that increased government spending will weaken the economy. That is because government, if it continues to grow, inevitably begins to duplicate services provided by the private sector. Since the government has the power to grant itself a legal monopoly or oligopoly, it can prevent private firms from competing and can run enterprises on the basis of political, as opposed to economic, considerations.

A variety of factors, including the type of spending, undoubtedly influences the level at which government spending becomes counterproductive. Basic infrastructure payments, for instance, generally help the economy. Subsidies of all varieties do not.

What is indisputable is that the greater the level of government spending, the greater the chances that it will be put to less than optimal use. Public choice economists have established the behavioral theory for explaining this phenomenon.

As government spending grows and the number of beneficiaries increases, politicians begin showering money on distinct constituencies. Incredibly expensive federal programs, such as farm subsidies and urban mass transit programs, help small groups of people while weakening the economy generally. In addition, many well-meaning social programs, largely those associated with income transfers and cash assistance, have such adverse effects on

savings and labor supply that they discourage productive activity. These all are the natural result of political incentives. Politicians get "paid" (re-elected) for directing government money toward their constituents.

Last year's budget compromise, which only succeeded in reducing the deficit by 72 cents for every dollar of new taxes, illustrates this process. The 28 cents of increased federal spending that resulted from the budget summit can be thought of as the political profit, a 28 percent commission, politicians skimmed off the tax increases. Of course this $8 billion was not divided equally into 535 payments for each member of Congress. Instead, the commission was taken in the form of political currency -- increased public spending conferred strategically on selected segments of the electorate. And, that currency was calculated to buy votes to help keep each member safely ensconced in office. It should not be surprising under these circumstances that the overall rate of re-election in the Untied States Congress currently stands at about 90 percent.

Politicians usually support the growth of bigger government by increasing taxes a little on many different taxpayers and then conferring the benefits in concentrated form on relatively small groups of beneficiaries. Given this arrangement, citizens confront a choice when they discover they are not receiving what they consider to be adequate return on their tax payments: they may organize a broad based citizen tax revolt to lower taxes or they may join together in special interest groups to seek concentrated benefits that will benefit them and increase their benefit/tax ratio while increasing taxes only a little on everyone. Except under very special circumstances, the latter strategy is the most politically effective.

Summary. The combination of high levels of government spending and the associated high tax burdens necessary to finance that spending effectively deprive the productive private sector of much needed capital. Thus, as government becomes more "successful," an economy can get increasingly weak. Theoretical and empirical work in several branches of economics offer confirmatory evidence that beyond a certain minimal level, growth in government comes at the expense of economic growth.

Studies on the welfare effects of taxation have shown that the marginal excess burden from raising new tax revenues is frequently higher than the return from any conceivable new government program. Public choice economists have provided a theory of political economy that explains why in a democracy politicians have both the motive and opportunity to expand government. Unless properly constrained, this theory predicts that governments possess a natural proclivity to grow.

In addition, a growing body of empirical evidence confirms that Congress tends to "spend" any tax increase and then some.[14] Others who have looked at the question have argued there is no significant relationship between tax increases and spending increases.[15] What is indisputably true is that there is no evidence that Congress has used tax increases to reduce deficits, nor is there any reason to believe they are likely to change their behavior. Finally, empirical evidence is mounting that economic growth rates will inevitably decline as the naturally expanding government adopts new spending programs with revenues absconded from over-taxed income-producing factors owned by private citizens. This

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[14] Vedder, Richard and Lowell Galloway, "Soaking the Rich Through Tax Cuts," *Wall Street Journal*, March 21, 1985.

[15] Stein, Herbert, "The New Parkinson's Law," *Wall Street Journal*, July 13, 1988.

relationship is depicted in the following illustration.

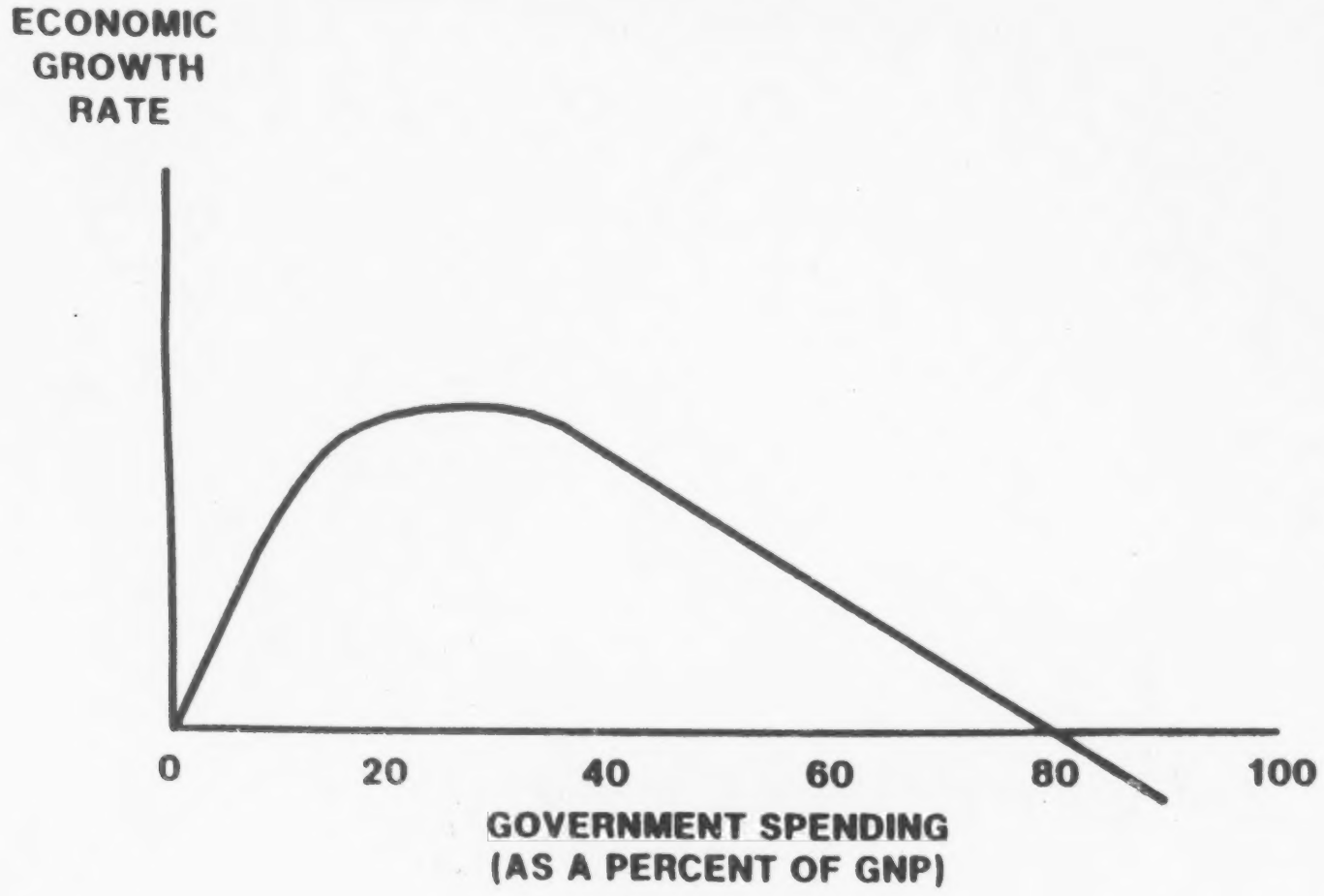
WE DO NOT NEED A TAX INCREASE

Fortunately, as a result of strong economic growth and effective restraints on spending growth stemming from the Gramm-Rudman-Hollings deficit reduction act, the federal budget is moving rapidly toward balance. Even using the Congressional Budget Office's (CBO) pessimistic projection of a 2.6 percent increase in real economic growth per year and a 4.5 percent average annual rate of inflation, the government would take in some $1.262 trillion per year by 1993, compared to the approximately $900 billion estimated for this year.

More realistic real growth assumptions -- such as the 3.3 percent per year average from the past forty years, which is still well below the 3.8 percent per year average of the last 5 years -- would yield a whopping $1.326 trillion per year by 1993. In short, enough money will come in over the next five years without a tax increase to eliminate the deficit by instituting a fair freeze on spending that would fund Social Security fully, pay the necessary interest on the national debt, and cover the inflation induced cost increases in every other government program now on the books. See Appendix I for details on the Fair Freeze.

Social Security payments are expected to be up approximately $52 billion per year higher by 1993 and interest payments are expected to cost $43 billion to $55 billion more per year by 1993. But, after these deductions from that year's expected tax revenue, there still will be an estimated $258 billion to $330 billion to apply to deficit reduction, increased spending on existing programs, new programs or tax reduction. Congress could add to the

GOVERNMENT SPENDING AND ECONOMIC GROWTH



pool of funds at its disposal by reducing or eliminating programs that are unjustified or not cost effective, such as, closing unneeded military bases.

Finally, Congress could add substantially to the pool of funds available for deficit reduction, while at the same time increasing the efficient delivery of many services, by adopting a number of the recommendations of the President's Commission on Privatization and recommendations from the Report of the Privatization Task Force (See Appendix II). Clearly, the budget can be balanced by 1993 without increasing taxes and without cutting Social Security or any other needed programs. The evidence is clear: tax increases slow economic growth and often lead to higher deficits -- remember the unfulfilled promises -- "$3 in spending cuts for every $1 in tax increases" -- when taxes were increased in 1982.

The record speaks for itself. Tax revenues have increased and the deficit is shrinking. The major threat to continued economic expansion is increased government spending financed by higher taxes. A tax increase would slow economic growth -- since it is more likely to reduce the amount of money available for productive investment rather then increase it -- thus crippling the most effective bulwark against poverty and unemployment. Because a tax increase is likely to be a vehicle for additional government spending rather than less, its effect on reducing the deficit will be minuscule, but its effect on the economy may be devastating.

Fortunately, there is a way both to increase funds available for capital formation and to eliminate the deficit without producing the negative side effects associated with tax increases. There is nothing magic about the solution. All Congress must do is hold the increase in government spending to the rate of inflation and begin privatizing those functions now performed by government that could be handled more effectively by the private sector. Congress and the President should "just say no" to a tax increase.

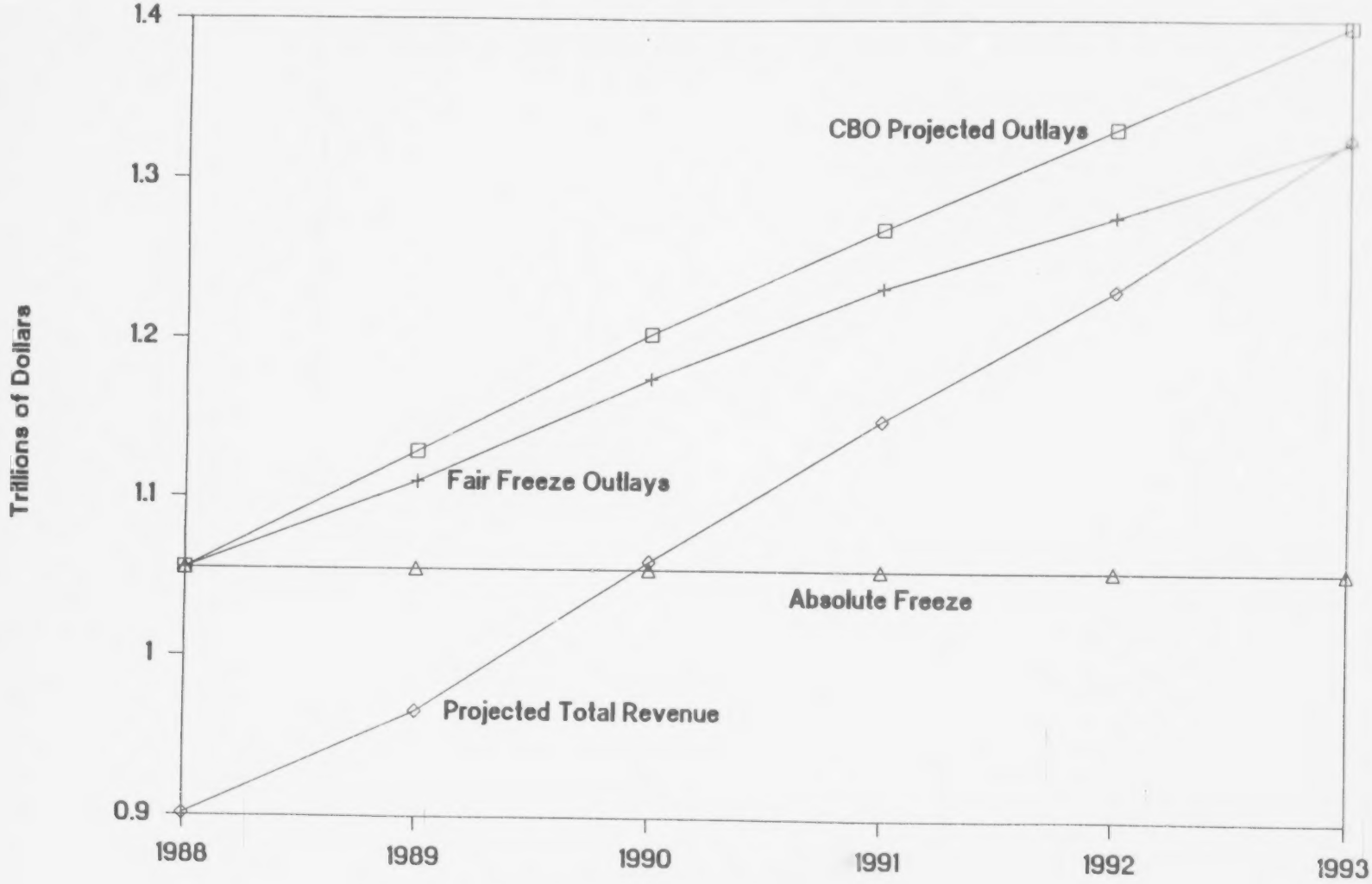
Appendix I

THE FAIR FREEZE SOLUTION TO BALANCE THE FEDERAL BUDGET

THE FEDERAL BUDGET CAN BE BALANCED BY 1993 WITHOUT CUTTING SPENDING AND WITHOUT RAISING TAXES.

- The federal budget deficit persists despite continuously rising federal revenues because the rate of growth in federal spending exceeds that of federal revenues.
- The Fair Freeze Solution to balancing the federal budget adjusts the growth rate of spending downward slightly to bring it into line with the rate at which revenues are growing.
- The Fair Freeze Solution is based on the assumption that the economy will grow at the same average annual rate it has over the last forty years.
- The Fair Freeze Solution has three components:
    - Interest on the federal debt is allowed to increase at the rate estimated by the Congressional Budget Office (CBO). *No assumption is made that interest rates will decrease in response to falling deficits.*
    - Social Security benefits are allowed to increase at the rate CBO estimates is necessary to provide benefits called for under current law. *Social Security benefits are not touched.*
    - Remaining federal spending is permitted to increase at CBO's estimated rate of inflation. *No spending cuts are required.*

The Fair Freeze Solution *



* Based on 40 yr. ave. GNP growth rate

THE FAIR FREEZE SOLUTION *
(Fiscal years; in billions of dollars)

YEARS	SOCIAL SECURITY (a)	NET INTEREST (b)	OUTLAYS SUBJECT TO FAIR FREEZE (c)	CBO PROJECTED TOTAL OUTLAYS	FAIR FREEZE OUTLAYS (d)	PROJECTED TOTAL REVENUE (e)	FAIR FREEZE DEFICIT (f)
1988	203	151	701	1055	1055	901	154
1989	213	164	733	1129	1110	966	144
1990	225	181	769	1203	1175	1060	115
1991	237	192	803	1269	1232	1149	83
1992	246	193	838	1332	1277	1231	46
1993	255	194	875	1396	1324	1326	-2

* Assumes that the Average Annual GNP Growth Rate for 1988 to 1993 will equal the historic average rate for the forty-year period from 1948-1987 (3.27%)

(a) Social Security is allowed to grow at the rate CBO estimates is necessary to provide Old Age, Survivors, and Disability Insurance (OASDI) benefits as stipulated by current law.

(b) CBO Net Interest expenditures estimates adjusted to include net interest savings from higher GNP Growth Rate assumptions using CBO ten-year interest rate assumptions.

(c) Under a "Fair Spending Freeze" all spending except that for net interest and Social Security would be allowed to increase at the rate of inflation as projected by CBO.

(d) Fair Freeze Outlays are equal to the sum of Social Security, net interest and outlays subject to Fair Freeze.

(e) Total Revenue is based on the rule of thumb used by CBO to estimate the revenue effects of a change in real GNP growth.

(f) The Fair Freeze Deficit equals the difference between Projected Total Revenue and Fair Freeze Outlays.

Appendix II

POTENTIAL REVENUES FROM PRIVATIZATION

PROGRAM OR ASSET	UNITS TO BE SOLD	SALE VALUE ($ Billions)
Commodity lands (48 contiguous states)	272.9 million Acres/97.7 million acres	$136.0
Tennessee Valley Authority	Generating facilitis and transmission system	$ 12.3
Air Traffic Control	Control System	$ 0.0 - $2.0
Military Bases	Obsolete Bases	($ 0.1 per base minimum)
Postal Service	All Assets	$ 11.0
Electromagnetic Spectrum	AM & FM Radio and Broadcast TV airwaves	$ 8.6
Loan Portfolio	$250 billion value	$ 95.0
Naval Petroleum Reserves	2 Fields	$ 3.6 to $ 4.3
Dulles & National Airports	All Facilities	$ 2.5 to $ 3.0
Power Marketing Associations	5 Agencies	$ 13.9
Amtrak	Some Assets	$ 1.0
Total *		$307.9 to $311.1

* Figure does not include minimum of $5 billion from sale of 50 surplus military bases.

Source: Report of the Privatization Task Force, June 1988

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COMPETITIVENESS IS ALIVE, WELL, AND THRIVING IN AMERICA

by

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U.S. Chamber of Commerce

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EXECUTIVE SUMMARY

"America has lost it dominant position in the global economy." "America no longer has the world's highest standard of living." "Productivity growth is lagging behind that of other countries." "America is one more washed-up nation, declining inevitably from its greatness like other great powers of the past." These are the headlines. These are the myths.

In this policy working paper, the issue of American competitiveness is reexamined. The paper also demonstrates how some reports, such as the one by the Council on Competitiveness, manage to grossly exaggerate the well-being of other countries in comparison to that of the United States, while portraying the U.S. economy in the worst possible light. The paper concludes that, contrary to widespread reports, American competitiveness is resurgent. The American standard of living has never been higher, and the prospect for sustained improvement in the economic well-being of all Americans has never been brighter.

The most important single indicator for competitiveness is the standard of living. In 1987, U.S. real per capita disposable income, adjusted for inflation, was at an all-time high, growing steadily throughout the recovery from the last recession of 1981-82. Improvement in family income has been equally remarkable. Median family income also reached a record level in 1987.

Amazingly, the record on family income growth has been misinterpreted to support the stagnant-standard-of-living thesis. It frequently is reported that median family income only recently rose above the level it had attained in 1979, and is virtually identical to its previous all-time high of 1973. Based on this comparison, it is asserted that the American family's standard of living has not increased significantly in 15 years. Such reports neglect to mention what happened to family income during the economic malaise of the late 1970s and the recessionary aftermath in the early 1980s. After remaining stagnant from 1973 to 1977, median family income plummeted between 1978 and 1982. Since 1982, family income has rebounded at a rate unseen since the prosperous 1960s.

International comparisons of standards of living place this issue in perspective. Compared to other countries, U.S. per capita gross domestic product (GDP) is still far above that of Japan and Europe, including the Scandinavian countries.

U.S. manufacturing productivity growth for the past 5 years reached a postwar record, tripling its rate of the 1970s. Compared to other countries, U.S. manufacturing productivity growth was among the highest. While productivity growth has been on the decline in many other countries, it has been increasing steadily in the United States.

Investment also jumped after 1982 and is the main factor accounting for America's growing productivity. Per employed person, nonresidential gross fixed investment in the United States has been higher than in Japan and West Germany.

The economic trends established in the 1970s and the culmination of these trends in the severe recession of 1981-82 produced a well-founded and deep-seated anxiety among Americans concerning the United States' economic future. The years since 1982 should have provided the economic tonic to dispel concern over American competitiveness in the global economy. Instead, for many analysts and policymakers, the shadow of the 1970s stretches long into the present and eclipses America's remarkable economic resurgence of the past 6 years.

Introduction

"America has lost its competitive edge in the world and now faces economic decline." That is the message of a recent barrage of reports purporting to demonstrate the existence of an American competitiveness problem.[1] The message is false. A few reports have demonstrated a turnaround in America's competitiveness. The New York Federal Reserve recently reports that "U.S. manufacturing has clearly become more competitive in recent years. This achievement was the result of sharp dollar depreciation, wage restraint, and strong improvements in U.S. productivity and quality performance."[2] The competitiveness crisis is an imagined problem rooted in the bygone economic stagnation of the 1970s and the period of severe economic recession that immediately followed in the early 1980s. These economic body blows left the nation reeling in self-doubt and highly susceptible to a doom-and-gloom prognosis. At the time the American economy hit bottom in 1982, the idea of a "competitiveness gap" fit the national mood perfectly. By 1985, "competitiveness" had become a national buzzword. Research on the so-called "competitiveness gap" developed into a growth industry among think tanks and the *cause celebri* of interest groups across the land. Despite this growing fascination with competitiveness, there continues to be great confusion over the concept's meaning.

The Concept of Competitiveness

On the one hand, economics is like baseball; each has a blue-zillion statistics, but performance in both boils down to a single datum -- in baseball, it is the won/lost record, in economics, it is the standard of living record. On the other hand, economics is very

much unlike baseball, in which one team wins at the other's expense. Economics is not a zero-sum game. To the contrary, free economies represent the ultimate cooperative social activity in which all may improve their plight without inflicting harm or privation upon others. Therefore, "competition" and "competitiveness" have quite different meanings in baseball and economics. Much of the problem with studies on American competitiveness results from a confusion between the two.

A competitive economy is one in which buyers and sellers, producers and consumers are free to maximize their wealth and satisfaction through commerce and trade. The material betterment of a nation's people made possible by the free conduct of commerce does not come at the expense of other nations. It is a mercantilist fallacy to label an economy "competitive" only to the extent that it outgrows or outsells or outproduces or outinvests or "outanythings" other nations.

The true measure of economic competitiveness is the extent to which an economic system is able to produce a rising standard of living for its citizens. What counts, therefore, is the level of economic well-being citizens enjoy and how rapidly that well-being is increasing relative to the past.

As in all human endeavors, it is natural to look for a measuring rod against which to judge success; in economics, that measuring rod is the performance of other economies. To the extent that such a comparison remains an analytical *means* to improve economic policy, it enhances economic growth. However, when improvement in the relative position of a nation on international rankings becomes an end in itself, the comparison ceases to have economic meaning or usefulness. Comparisons of this nature reflect the hot

emotions of envy more than the cool intellect of scientific comparisons. What results is a counterproductive political contest that may generate harmful mercantilist policies and ultimately depress the standard of living.

To evaluate America's competitiveness, one should measure the absolute standard of living at a point in time and chart the change in that absolute standard over time. Several additional indicators are useful to assist in monitoring the ability of the American economy to continue producing increases in the standard of living. One such indicator would chart the change in the American standard of living relative to that of other countries. In addition, factors that are important in achieving a high standard of living, such as productivity, investment, and research and development, should be examined as supplements to any aggregate indices that are constructed.

The Construction of Indicators

The most commonly used indicator for measuring the American standard of living is real per capita disposable personal income. This indicator shows the average income available for each person after adjusting for taxes and inflation.

When comparing the relative standard of living among different countries, the most commonly used measure is real per capita gross domestic product (GDP) converted into U.S. dollars by using exchange rates. There are, however, many problems with using exchange rates to convert the GDP data. For example, exchange rates reflect only the prices of goods and services that are traded internationally. Since most services are not traded internationally, the differences between the prices of non-traded goods and services among countries cannot be captured through changes in the exchange rate. In addition,

exchange rate movements often are determined by the decisions of monetary authorities of a group of nations; therefore, variations in the exchange rate frequently do not reflect the supply or demand of currencies determined by economic factors such as prices of goods. Regardless of the reason for a change in the exchange rate, such a change will produce a change in exchange-rate-converted GDP, even though the actual GDP remains unchanged.

In order to resolve these issues, purchasing power parity (PPP) exchange rates are introduced. PPP is defined as the ratio of one country's prices to another's for the same quantity of both traded and non-traded goods.[3] PPP exchange rates, which are expressed as units of foreign currency per U.S. dollar, represent the number of foreign currency units required to buy goods and services equivalent to what can be bought in the United States with one dollar. Thus, they are used to convert foreign GDP into a common denominator of U.S. dollars.

Some analysts argue for a different measure of the standard of living. The Council on Competitiveness proposes a standard of living index that is measured as GDP plus the current account balance, divided by the number of employed persons.[4] The rationale for including the current account balance is to "adjust each nation's total output for what is owed to foreigners." This definition of the standard of living is misleading and biased for three reasons. First, the established measure of the nation's output (GDP) is composed of personal consumption expenditures, plus gross private domestic investment, plus government purchases of goods and services. Then exports, which are produced but not consumed in the country, are added to the sum, and imports, which are consumed but

not produced in the country, are subtracted. Since net exports (exports minus imports) are a part of the current account balance,[5] adding the current account balance to GDP results in double counting.

Secondly, the use of total employment instead of population causes a bias when comparing the standards of living of different nations. The number of employees includes part-time workers as well as full-time workers. The United States has had the highest proportion of part-time employees relative to all employees in all G-7 countries[6] except the United Kingdom. For example, in 1986, the ratio of part-time employees to total employees in the United States was 17.4, compared to 11.7 in Japan, and 12.3 in West Germany.[7] Therefore, this usage would yield an undeserved lower standard of living for the United States, when compared to other countries, since part-time workers generally produce less than full-time workers. Moreover, such a measure is perverse. A country that has a lower employment-population ratio than another country, probably because of significant unemployment, can be interpreted as having a higher standard of living, even though the per capita GDPs of the two nations are about the same. Thus, a country is penalized for either having a higher proportion of part-time employees with respect to total employees or for having a higher employment-population ratio.

Thirdly, in addition to its technical flaws, the Council's measure is conceptually flawed. It commits the mercantilists' mistake of ignoring comparative advantage as the basis for trade patterns. With its index, the Council explicitly asserts that a country that strives for a current account surplus -- perhaps by erecting import barriers -- is by definition raising its standard of living. A country can also have a current account surplus

because of large interest and dividend earnings from investments abroad. West Germany, for example, has a large current account surplus that is partly attributable to heavy investment abroad. With a 9 percent unemployment rate, however, Germany might be better off if some capital outflows were instead channelled to domestic use and resulted in increased employment for German workers.

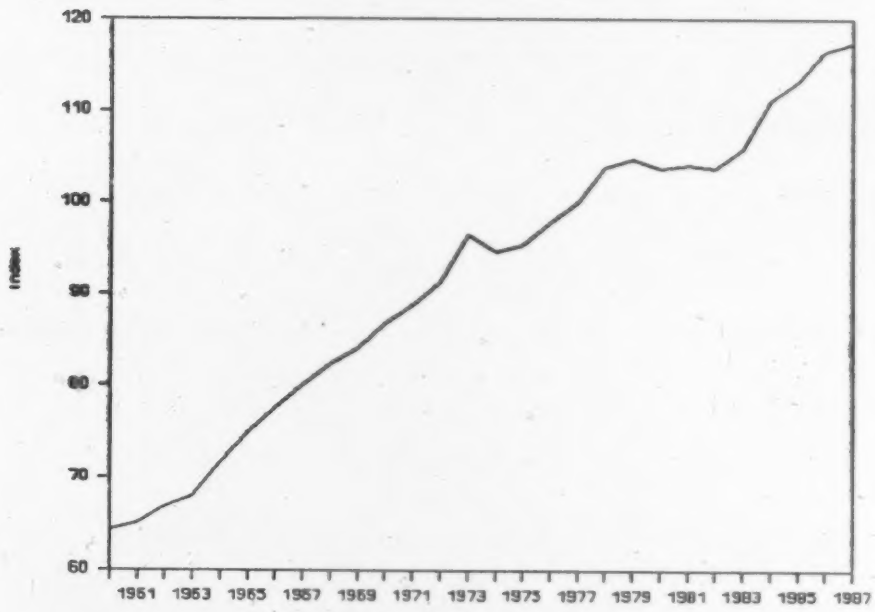
In addition to the above flaws in the definition, the Council on Competitiveness uses 1980 exchange rates to convert foreign data into U.S. dollars. No explanation is provided of why the 1980 exchange rate is superior to any other year to convert all the foreign data between 1970 and 1987. Yet, by selecting the 1980 exchange rate, the Council on Competitiveness grossly exaggerates the well-being of other countries in comparison to that of the United States, while portraying the U.S. economy in the worst possible light. The dollar exchange rate in 1980 was at its lowest before it rose to its peak in 1985, and then fell again until recently. In order to find the foreign nation's GDP in U.S. dollars, foreign exchange per dollar is used to divide a foreign nation's GDP. When the dollar is weak, it takes less foreign exchange to buy one dollar. A low dollar exchange rate means less foreign exchange per dollar. Since foreign exchange per dollar is the denominator, a smaller denominator yields a larger foreign GDP in terms of U.S. dollars. In other words, if the 1985 exchange rate were selected instead of the 1980 rate, the strong dollar would result in a much more favorable standard of living for the United States, because foreign currencies depreciated against the dollar by about 30 percent during the period 1980 to early 1985.

The U.S. Absolute Standard of Living Index

Real per capita disposable income grew steadily during the 1960s, then fell sharply in 1974 before rising again, only to stagnate between 1978 and 1982. After the 1981-82 recession, per capita disposable income began to rise steadily, reaching an all-time high in 1987. Between 1982 and 1987, real per capita disposable income rose at an average of 2.53 percent per year, compared to an average annual rate of 0.83 percent per year during the 1974 to 1982 period (see Chart 1).

CHART 1

Real Per Capita Disposable Income Index
(1977 = 100)



Source: Department of Commerce, Bureau of Economic Analysis & Bureau of the Census

Chart 1 shows the U.S. standard of living, measured by real per capita income after taxes, divided by the population. It shows per capita disposable income in 1982 dollars, indexed so that 1977 = 100.

Another measure of income is family income adjusted for the rate of inflation. Since 1982, real family income has increased by 11.8 percent. These recent increases have brought real family income to an all-time peak level, comparable to that of the previous peak in 1973, before a series of recessions resulted in substantial declines in real family income. The past 5 years of continuous growth in family income is the most sustained increase in 20 years.

The U.S. Absolute Standard of Living Versus Other Major Industrial Nations

Even though real output per capita (GDP) is not the most complete measure for the standard of living, it is the most commonly used indicator. While personal income is more relevant to the standard of living of a nation's citizens, the data on the income side of the national income account for other nations are not available. The published PPP exchange rate is used for converting only GDP, not for personal income; therefore, real GDP per capita is the only available measure for a comparison of international standards of living. Table 1 shows that the United States continues to enjoy the highest absolute standard of living in the world, including the Scandinavian countries, that are often thought to have the highest standard of living of all.

TABLE 1

Real Per Capita GDP in 1987
(In 1987 Dollars, PPP Exchange Rates)

Denmark	$13,240
Japan	13,198
Norway	15,563
Sweden	13,856
U.S.	18,289
W. Germany	13,349

Source: Bureau of Labor Statistics

While the rate of growth of the U.S. standard of living was slower than that of many industrial nations during the 1970s, a change in trends emerged recently. Between 1973 and 1982, the average annual growth rate of real per capita GDP in the United States was the lowest among the G-7 nations. From 1983 to 1987, however, the U.S. average annual growth rate was among the highest of these nations, only slightly lower than Japan's (see Table 2).

TABLE 2

Real Per Capita GDP
(Average Annual Rate Of Change)

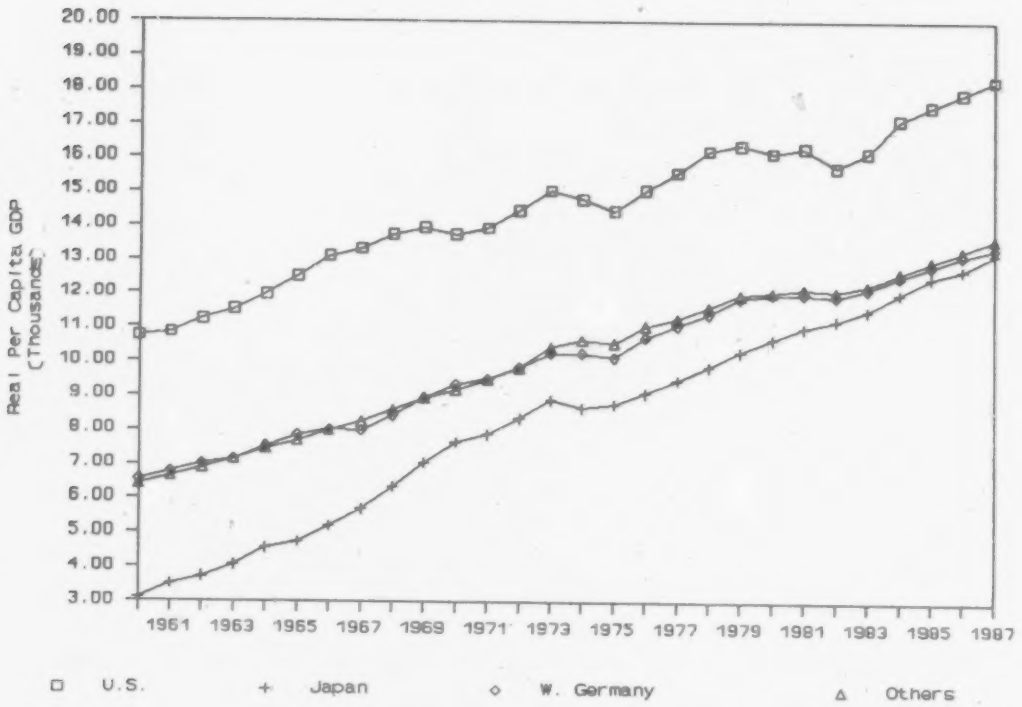
Country	1960-73	1974-82	1983-87
Canada	3.8	1.8	3.1
Japan	8.5	2.7	3.2
France	4.5	2.1	1.1
U.K.	2.6	0.8	3.0
U.S.	2.6	0.6	3.1
W. Germany	3.5	1.7	2.3

Source: Bureau of Labor Statistics

Even though most of the countries listed in Table 1 experienced a higher rate of growth in real per capita GDP after 1982, the U.S. performance showed the greatest improvement. In fact, the United States and the United Kingdom are the only two countries in which the recent average growth rates in real per capita GDP exceed their 1960-73 growth rates. And because of the outstanding performance in U.S. productivity and investment since 1982, the recent high growth rate of real per capita GDP still keeps the absolute real per capita GDP of the United States substantially higher than those of other G-7 nations (see Chart 2)

CHART 2

Real Per Capita GDP For the G-7 Nations



Source: Bureau of Labor Statistics, Office of Productivity and Technology, *Comparative Real Gross Domestic Product,* May 1988, (unpublished data). Each country's GDP is converted into U.S. dollars using the PPP exchange for total GDP.

Chart 2 shows per capita GDP in 1987 dollars for the G-7 nations. The real per capita GDP for the United States has been significantly higher than that of Japan, West Germany, and the average of Canada, France, Italy, and the United Kingdom.

The Relative Standard of Living Index

The relative standard of living index between the United States and other G-7 nations is constructed by dividing the U.S. real per capita GDP by the weighted average of the real per capita GDP of the other 6 of the G-7 nations, and then multiplying it by

100.[8] An index of 100 means the U.S. standard of living is about the same as the weighted average of the standard of living of those 6 nations. An index of more than 100 implies that the U.S. standard of living is higher than the average of the standards of living of the 6 nations. For example, if the index is 150, it means the U.S. standard of living is about 50 percent higher than the average of the 6 nations (see Chart 3).

CHART 3

Relative Standard Of Living Index

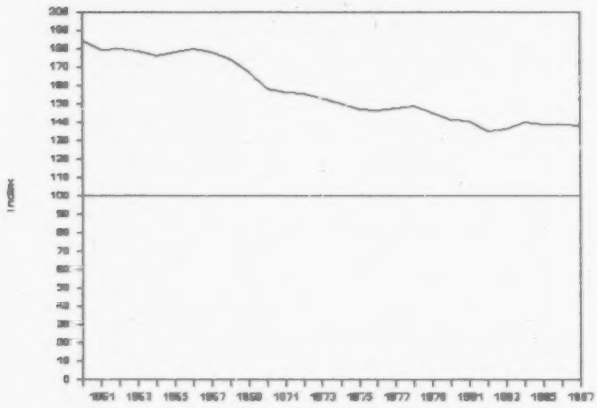


Chart 3 shows the relative standard of living index which was 184 in 1960, but eventually declined to its lowest point of 135 in 1982, before climbing to 138 in 1987. The relative index must be interpreted with great care. The decline in the index gives the inaccurate impression that U.S. performance is deteriorating while other countries are prospering. One reason for a decline in this index could be an absolute decline or a stagnation in the U.S. standard of living while other countries' living standards grow. Another reason for a decline in the index could be that the U.S. standard of living grows but those of other countries, many of which were destroyed by war less than 50 years ago, grow at faster rates. Since the latter, not the former, is the case, the "relative decline"

of the United States has been exaggerated.

Nonetheless, this notion of the "relative decline" of the United States has led many people to believe that the prosperity of our trading partners has diminished our own affluence and, therefore, to accept the alleged loss of U.S. competitiveness. In fact, the prosperity of our trading partners provides expanded trading and investment opportunity for the American people. It is a myth generated by the politics of envy, not by the law of economics, that one person or country creates wealth at the expense of another. The U.S. position always has been that American freedom and prosperity are most secure when other countries are prosperous and free. It is in our self-interest to seek a more prosperous world. Only when the world is viewed through the green-tinted lenses of envy, can we believe the economic good fortune of our allies bodes ill for America. Thus, we should not let unfounded fears lead us to misread the facts.

Factors Determining Competitiveness

There is no basis for accepting the alleged loss of U.S. competitiveness if we examine those variables that contribute to a country's competitiveness, such as manufacturing productivity, investment, and research and development.

Productivity

The most popular measure of productivity in the context of competitiveness is manufacturing output per hour. It is generally agreed that the United States still has the highest productivity in absolute terms. There are, however, no official government statistics on the subject. The problem with comparing the level of productivity for different countries is that there is no suitable exchange rate to convert the value of manufacturing output in each country's currency into dollars. Some analysts have attempted to compare the absolute level of manufacturing output per hour. For example,

the Council on Competitiveness uses PPP exchange rates to convert other G-7 nations' manufacturing output per hour into dollars. The flaw in this method is that PPP exchange rates, which are constructed for converting GDP only, are derived from the expenditure side of the national accounts (consumer, business, and government expenditure on final goods and services) and not from the output side of the account (gross product by industry). In fact, PPP exchange rates by industry are not available. Data Resources, Inc. constructed PPP exchange rates based on selected final expenditures by consumers and businesses to convert foreign currency data into U.S. dollars.[9] Although this method provides a better approximation of a PPP exchange rate for the manufacturing sector than the method used by the Council on Competitiveness, it still includes more than value added by manufacturing firms. To circumvent the problem of the appropriate PPP to use, the Bureau of Labor Statistics uses GDP per employed person as a proxy for productivity in comparing the absolute levels for different countries. According to this approach, the United States has the highest level of GDP per employed person (see Table 3).

TABLE 3

Real GDP Per Employed Person in 1987 (U.S. 1987 Dollars, PPP Exchange Rates)

Canada	$37,150
France	33,171
Japan	27,508
Italy	33,259
U.K.	27,982
U.S.	38,896
W. Germany	31,546

Source: Bureau of Labor Statistics

Compare to past performance, U.S. manufacturing productivity has improved dramatically during the 1980s (see Chart 4).

CHART 4

U.S. Productivity Index (1977 = 100)

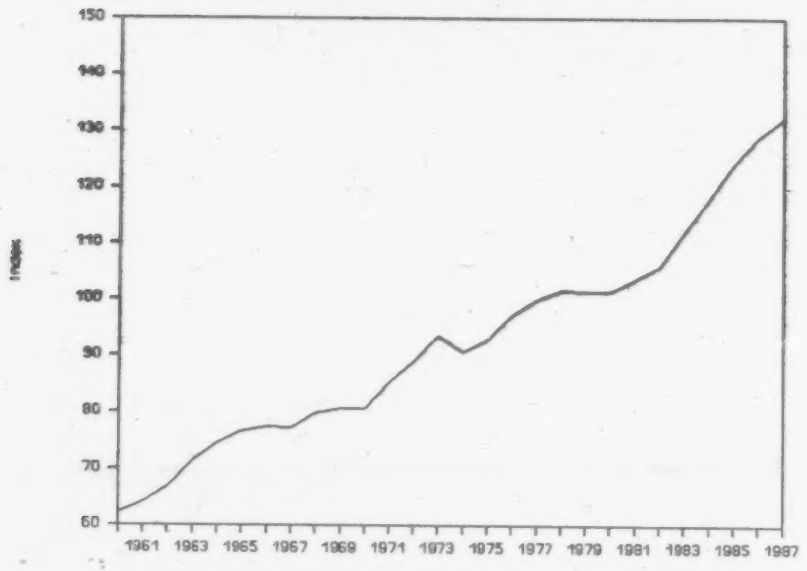


Chart 4 shows U.S. productivity measured by manufacturing output per hour, indexed so that 1977 = 100. The index has improved dramatically since 1982.

Since a reliable international level comparison of manufacturing output is not available, only trends or growth rates are compared. The average annual growth rate in manufacturing productivity tripled its rate over the 1970s, significantly outstripping productivity growth abroad; as a result, the actual level of U.S. manufacturing productivity has improved substantially over that of other major industrial countries (see Chart 5).

CHART 5

Manufacturing Output Per Hour
Average Annual Growth Rate

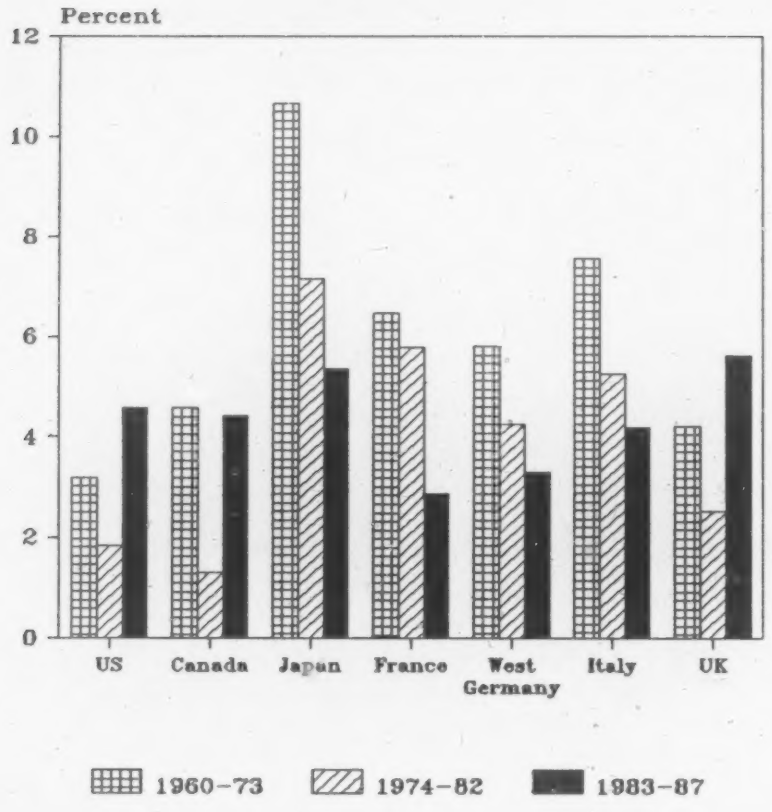


Chart 5 compares the average annual rate of growth in manufacturing productivity for the United States to that of other G-7 countries in 3 subperiods. The average annual rate of growth of U.S. manufacturing productivity was among the lowest in the G-7 countries at 1.84 percent during the 1974 to 1982 period. Between 1983 and 1987, however, the average growth rate in manufacturing productivity was among the highest of those countries at 4.57 percent. While other countries' growth rates of the recent period have been falling from the previous period, the growth rates of Canada, the United States, and

the United Kingdom have been increasing.

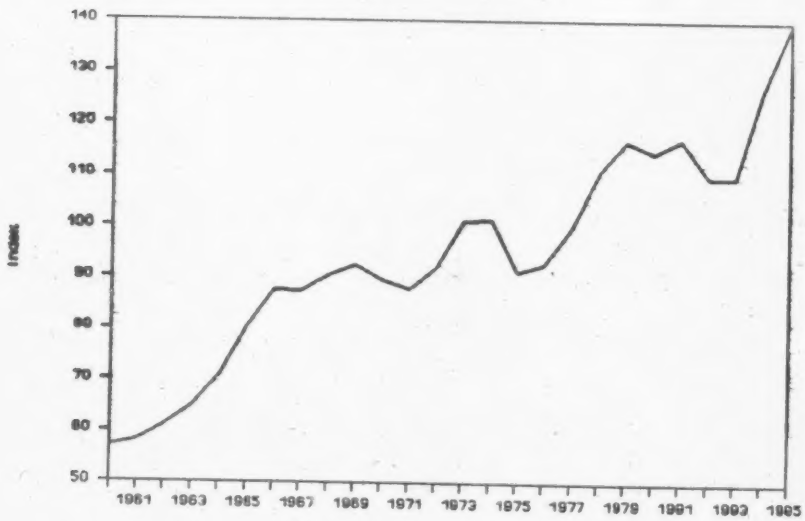
Investment

The U.S. investment outlook shows tremendous improvement and is more favorable than that of Japan and Europe. The variable usually observed is real nonresidential gross fixed capital formation (or nonresidential gross fixed investment) which is composed of real values of nonresidential construction and producers' durable goods. It shows how much new nonresidential investment, after adjusted for inflation, occurs during the year[10] (see Chart 6).

Chart 6 shows the index of nonresidential gross fixed capital formation in 1985 dollars from the years 1960 to 1985. Between 1983 and 1985, nonresidential gross fixed investment grew at an annual rate that was more than triple that of the 1973-82 period (1985 is the most recent year the data are available).[11]

CHART 6

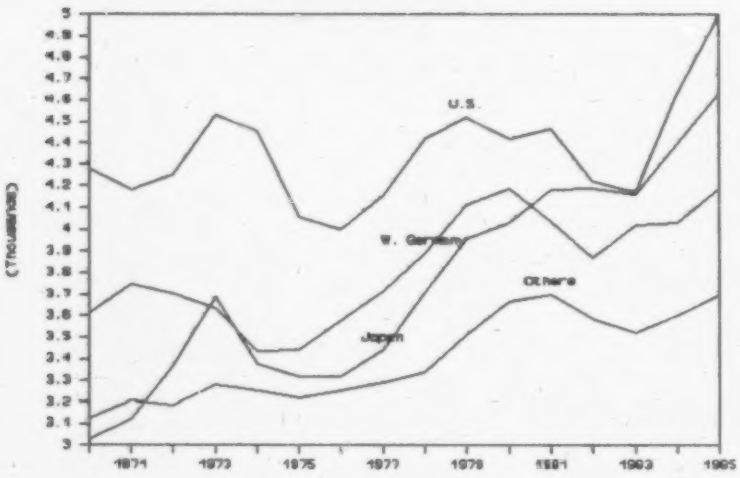
U.S. Nonresidential Gross Fixed Capital Formation
Index (1977 = 100)



For international comparisons of the level of investment, the levels of nonresidential gross fixed investment per worker are compared. In the United States, investment per employed person fell dramatically between 1974 and 1982. At the same time, investment per employed person in Japan continued to rise and leveled off close to the U.S. level in 1982. But between 1983 and 1985, the U.S. level rose sharply at about 5.9 percent per year, compared to 2.8 percent in Japan during the same period. Consequently, the U.S. level is still above Japan's, West Germany's, and the average of the rest of the G-7 countries (see Chart 7).

CHART 7

Nonresidential Gross Fixed Capital Formation Per Employed Person



Source: Bureau of Labor Statistics, Office of Productivity and Technology, *Real Gross Fixed Capital Formation (Excluding Residential Buildings)*, October 1987, (unpublished data). Each country's data are converted from its own currency to U.S. dollars by using the PPP exchange rate for capital formation.

Chart 7 shows nonresidential gross fixed capital formation per employed person, which is a proxy for the amount of capital available per worker, between 1970 and 1985

(not all data in all countries are available before 1970).

Research and Development

Research & development (R&D) also plays a role in determining productivity and quality performance. R&D expenditures are often reported as ratios of GNP. Some analysts argue that because of the relatively large size of the U.S. service and agricultural sectors, the ratio of R&D expenditures to GNP gives a downwardly biased impression of the U.S. research and development effort in manufacturing, the sector that is more crucial for competitiveness than the others.[12] A more suitable indicator suggested is the ratio of industrial research and development as a percentage of manufacturing sales. In 1979, this percentage was 1.51 for the United States, compared to 1.49 for Japan and 1.67 for West Germany. The U.S. percentage grew considerably during the 1980s, and has been higher than that of Japan and West Germany since 1982. In 1985, the U.S. percentage was 2.39, while percentages in Japan and West Germany were 2.24 and 1.99 respectively.

The National Science Board also reports that in the United States, R&D has enjoyed vigorous growth recently. Between 1980 and 1985, R&D expenditures in the United States increased by 74 percent, compared to 36 percent in West Germany, and 69 percent in Japan.[13] In 1986, R&D expenditures in constant dollars entered its 10th year of continuous expansion at a 5.9 percent increase over 1985. Therefore, the renewed R&D effort in the United States should continue to boost competitiveness in the future.

Conclusion

There is no basis to accept the alleged loss of U.S. competitiveness. Real per capita disposable income and median family income reached a record-high level in 1987. The American standard of living continues to be the highest in the world. American labor productivity in manufacturing improved dramatically during the 1980s. In recent years, the

investment outlook for plant, equipment, and producer durables has shown tremendous improvement, while investment in research and development has also enjoyed vigorous growth. Thus, the data do not suggest that in recent years, the United States has slipped either in absolute terms or relative to other countries. To the contrary, the data suggest that American competitiveness is resurgent, and that America indeed is entering a period of relative increase in its competitiveness.

Footnotes

[1] See for example, *Competitiveness Index*, Council on Competitiveness, 1988; *The Cuomo Commission Report*, The Cuomo Commission on Trade and Competitiveness, 1988; *Reassessing American Competitiveness*, National Planning Association on Changing International Realities, 1988.

[2] Susan Hickok, Linda A. Bell, and Janet Ceglowski, "The Competitiveness of U.S. Manufacturing Goods: Recent Changes and Prospects," Federal Reserve Bank of New York *Quarterly Review*, Spring 1988, pp. 7-22.

[3] The PPP exchange rates are calculated by the Organization for Economic Cooperation and Development (OECD) and the United Nations International Comparison Project (UNICP). Individual price surveys of a specified basket of goods and services of each country are compared to determine the PPP ratio for the year 1985. Using 1985 as the benchmark, the data are extrapolated to determine the PPP of other years.

[4] *Competitiveness Index*, Council on Competitiveness, 1988.

[5] The current account balance consists of balance on goods and services, income on foreign assets, government pensions, private remittances and other government and private transfers.

[6] The G-7 countries are the United States, Canada, Japan, France, Italy, and the United Kingdom.

[7] *OECD Employment Outlook*, September 1987, p. 28.

[8] The relative standard of living index is calculated by using the following formula:

$$\text{Relative Index} = (\text{U.S. per capita GDP}/\text{sum}(w^{*}\text{per capita GDP}_i))^{*}100,$$

where per capita GDP_i is per capita GDP of each of the six countries (Japan, Canada, France, West Germany, Italy, and the U.K.) and w is the weight of each of the six countries, determined by share of the country GDP, for example, weight of Japan is Japan's GDP divided by the sum of the GDPs of all the above six countries.

[9] Nigel Gault, "The Competitiveness of U.S. Manufacturing Industry: International Comparison of Labor, Energy, and Capital Costs," *Data Resources, Inc.*, 1985.

[10] No distinction is made between new investment for replacing old capital equipment and other new investment. In order to make any international comparisons of investment, the only PPP exchange rates that are available are for total capital formation.

[11] The Bureau of Labor Statistics is working on the revised and updated series.

[12] Susan Hickok, Linda A. Bell, and Janet Ceglowski, "The Competitiveness of U.S. Manufacturing Goods: Recent Changes and Prospects," Federal Reserve Bank of New York *Quarterly Review*, Spring 1988.

[13] *Science and Engineering Indicators,* National Science Board, 1987.